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REMARKS

Upon entry of the present amendment, claims 1-29 will be pending. Claims 1 and 21-24 have been amended and claims 28 and 29 have been added. Support for the amendment and added claims can be found, for example, in the specification as filed at page 4, lines 6-14. No new matter has been added. Applicants note with appreciation the indication of allowable subject matter in claims 18, 26, and 27.

I. The Drawings Are Correct In Light of the Amendments to the Specification.

The Examiner has objected to the drawings because Figure 1 shows line 2-2 instead of line 1-1, as described in the description of the drawings, and because Figure 9 includes reference number 120, which is not described in the specification.

The specification has been amended to replace line 1-1 with line 2-2 as shown in Figure 1. The specification has also been amended to indicate that numeral 120 refers to peak portions which correspond to valley portions 110.

Accordingly, the objection to the drawings has been corrected. Applicants respectfully request reconsideration and withdrawal of the objection.

II. The Amended Claims Are Not Indefinite under 35 U.S.C. § 112

The Examiner has rejected claims 1-27 as being indefinite under 35 U.S.C. § 112 for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention. Specifically, the Examiner rejected the limitation of "substantially constant" in claims 1 and 21 as being unclear, and that claim 21 as not including "active method steps." The Examiner has also rejected claim 15 as failing to comply with the written description requirement because claim 15 requires a height of the peaks as "at least 0.5 mm," while the specification defines the height as "about 0.5 mm to about 5 mm," which is allegedly inconsistent.

Claims 1 and 21 have been amended to further clarify that the thickness of the substrate varies no more than 30% throughout the substrate. Support for this amendment can be found in the application as filed on page 4, lines 7-8. Applicants assert that this limitation is clear such

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that amended claims 1 and 21 particularly points out and distinctly claims that which Applicants regard as the invention.

Claim 21 also has been amended to clarify that the abrasive coating is applied to the substrate. Support for this amendment can be found in the application as filed in Figure 9, page 10, lines 18-19, and on page 15, line 22. Applicants assert that this amendment makes claim 21 clear such that amended claim 21 particularly points out and distinctly claims that which Applicants regard as the invention by claiming an "active method step."

Regarding claim 15, Applicants argue that the limitation of "at least 0.5 mm" as claimed in claim 15 and the described range "from about 0.5 mm to about 5 mm" in the detailed description are not inconsistent because a person having ordinary skill in the art, upon reading the detailed description, would understand that the heights of the peaks can be greater than 5 mm. Moreover, Applicants assert that the claimed range of "at least 0.5 mm" is disclosed in the specification as filed. The claims are part of the specification. *See* 35 U.S.C. § 112, paragraph 2 ("The specification shall conclude with one or more claims..."). A height of "at least 0.5 mm" was included in the claims, as filed, thus this range was described in the original application. Therefore, Applicants may claim the height as recited in claim 15.

Accordingly, claims 1 and 21 are clear under 35 U.S.C. § 112, second paragraph, and the written description requirement under 35 U.S.C. § 112, first paragraph, is satisfied with respect to claim 15. Applicants respectfully request that the rejections be reconsidered and withdrawn.

III. Claims 1-10, 12-14, 16, 17 and 21-24 are Not Obvious over the Japanese Abstract (JP 2000-289132) in view of Lux (U.S. Pat. No. 5,928,070)

Claims 1-10, 12-14, 16-17, and 21-24 stand rejected under 35 U.S.C. § 103(a) as allegedly obvious over the Japanese Abstract in view of Lux. Applicants request reconsideration of this rejection, because neither the Japanese Abstract nor Lux, alone or in any proper combination, teach or suggest a nonwoven abrasive article having a substrate with a thickness that varies no more than 30% throughout the substrate, as required by the amended claims.

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The Japanese Abstract reports a pair of nonwoven layers having recesses on their surfaces (see, e.g., recesses 16 in the figure) so that the thickness varies by more than 30%. Lux reports a typical flat nonwoven having no peaks or valleys.

Applicants' claimed invention relates to an abrasive article comprising a nonwoven substrate having a first surface and an opposite second surface, the first and second surfaces defining a plurality of peaks and valleys, the first and second surfaces further defining a thickness, wherein the thickness varies by no more than 30% throughout the substrate, and an abrasive coating present on at least a portion of the first surface. The Japanese Abstract and Lux fail to teach or suggest an abrasive article with a substrate that forms peaks and valleys and that has a thickness that varies by no more than 30% throughout the substrate.

Rather, the Japanese Abstract reports a pair of nonwoven layers having deep recesses 16 on their surfaces. The Japanese Abstract does not teach or suggest a substrate with both peaks and valleys and a thickness which varies by no more than 30%. Similarly, Lux merely reports a typical nonwoven abrasive article that has no peaks or valleys, let alone a nonwoven substrate with peaks and valleys having a thickness that varies by no more than 30% throughout the substrate.

Accordingly, the rejection of claims 1-10, 12-14, 16-17, and 21-24 as allegedly obvious under 35 U.S.C. § 103(a) over the Japanese Abstract in view of Lux should be withdrawn.

IV. Claim 11 is Not Obvious over the Japanese Abstract in view of Lux and further in view of DeVoe et al. (U.S. Pat. No. 5,766,277)

Claim 11 stands rejected under 35 U.S.C. § 103(a) as allegedly obvious over the Japanese Abstract in view of Lux, as applied to claim 1, and further in view of DeVoe et al. Applicants request reconsideration of this rejection, because, as discussed above, neither the Japanese Abstract nor Lux, alone or in any proper combination, teach or suggest a nonwoven abrasive article having a substrate with a thickness that varies no more than 30% throughout the substrate, as required by the amended claims. DeVoe et al. do not remedy the deficiency in attempting to combine the reported teachings of the Japanese Abstract and Lux to obtain Applicants' claimed invention. DeVoe et al. fail to teach a nonwoven substrate defining a plurality of peaks and

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valleys wherein the thickness of the substrate varies by no more than 30% throughout the substrate. Accordingly, the rejection of claim 11 as allegedly obvious under 35 U.S.C. § 103(a) over the Japanese Abstract in view of Lux and further in view of DeVoe et al. should be withdrawn.

V. Claim 15 is Not Obvious over the Japanese Abstract in view of Lux and further in view of Gagliardi (U.S. Pat. No. 6,364,747)

Claim 15 stands rejected under 35 U.S.C. § 103(a) as allegedly obvious over the Japanese Abstract in view of Lux, as applied to claim 1, and further in view of Gagliardi. Applicants request reconsideration of this rejection, because, as discussed above, neither the Japanese Abstract nor Lux, alone or in any proper combination, teach or suggest a nonwoven abrasive article having a substrate with a thickness that varies no more than 30% throughout the substrate, as required by the amended claims. Gagliardi does not remedy the deficiency in attempting to combine the reported teachings of the Japanese Abstract and Lux to obtain Applicants' claimed invention. Gagliardi fails to teach a nonwoven substrate defining a plurality of peaks and valleys wherein the thickness of the substrate varies by no more than 30% throughout the substrate. Accordingly, the rejection of claim 15 as allegedly obvious under 35 U.S.C. § 103(a) over the Japanese Abstract in view of Lux and further in view of Gagliardi should be withdrawn.

VI. Claim 19 is Not Obvious over the Japanese Abstract in view of Lux and further in view of Nollen et al. (U.S. Pat. No. 4,888,091)

Claim 19 stands rejected under 35 U.S.C. § 103(a) as allegedly obvious over the Japanese Abstract in view of Lux, as applied to claim 1, and further in view of Nollen et al. Applicants request reconsideration of this rejection, because, as discussed above, neither the Japanese Abstract nor Lux, alone or in any proper combination, teach or suggest a nonwoven abrasive article having a substrate with a thickness that varies no more than 30% throughout the substrate, as required by the amended claims. Nollen et al. do not remedy the deficiency in attempting to combine the reported teachings of the Japanese Abstract and Lux to obtain Applicants' claimed invention. Nollen et al. fail to teach a nonwoven substrate defining a plurality of peaks and

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valleys wherein the thickness of the substrate varies by no more than 30% throughout the substrate. Accordingly, the rejection of claim 19 as allegedly obvious under 35 U.S.C. § 103(a) over the Japanese Abstract in view of Lux and further in view of Nollen et al. should be withdrawn.

VII. Claim 20 is Not Obvious over the Japanese Abstract in view of Lux and further in view of Braunschweig et al. (U.S. Pat. No. 6,197,076)

Claim 20 stands rejected under 35 U.S.C. § 103(a) as allegedly obvious over the Japanese Abstract in view of Lux, as applied to claim 1, and further in view of Braunschweig et al. Applicants request reconsideration of this rejection, because, as discussed above, neither the Japanese Abstract nor Lux, alone or in any proper combination, teach or suggest a nonwoven abrasive article having a substrate with a thickness that varies no more than 30% throughout the substrate, as required by the amended claims. Braunschweig et al. do not remedy the deficiency in attempting to combine the reported teachings of the Japanese Abstract and Lux to obtain Applicants' claimed invention. Braunschweig et al. fail to teach a nonwoven substrate defining a plurality of peaks and valleys wherein the thickness of the substrate varies by no more than 30% throughout the substrate. Accordingly, the rejection of claim 20 as allegedly obvious under 35 U.S.C. § 103(a) over the Japanese Abstract in view of Lux and further in view of Braunschweig et al. should be withdrawn.

VIII. Claim 25 is Not Obvious over the Japanese Abstract in view of Lux and further in view of King (U.S. Pat. No. 5,626,639)

Claim 25 stands rejected under 35 U.S.C. § 103(a) as allegedly obvious over the Japanese Abstract in view of Lux, as applied to claim 1, and further in view of King. Applicants request reconsideration of this rejection, because, as discussed above, neither the Japanese Abstract nor Lux, alone or in any proper combination, teach or suggest a nonwoven abrasive article having a substrate with a thickness that varies no more than 30% throughout the substrate, as required by the amended claims. King does not remedy the deficiency in attempting to combine the reported teachings of the Japanese Abstract and Lux to obtain Applicants' claimed invention. King fails

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to teach a nonwoven substrate defining a plurality of peaks and valleys wherein the thickness of the substrate varies by no more than 30% throughout the substrate. Accordingly, the rejection of claim 25 as allegedly obvious under 35 U.S.C. § 103(a) over the Japanese Abstract in view of Lux and further in view of King should be withdrawn.

IX. Conclusion

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested. The Examiner is invited to contact Applicants' undersigned representative with any questions concerning the present application.

Respectfully submitted,

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Date

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